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| EXAMINER |
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WONG, LUT

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| ART UNIT | PAPER NUMBER |
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2129

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 02/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/561,370

Applicant(s)

HANSEN ET AL.

Examiner

Lut Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/2/2006.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to a Preliminary AMENDMENT entered 12/13/2005.

Status of Claims

Claims 1-14 and 27 are pending. Claims 15-26, 28-39 have been cancelled. Claims 1, 8-12, 14 and 27 have been amended.

Specification

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The disclosure is objected to because of the following informalities:

Pg. 8: change "DETAILED DESCRIPTION OF THE PREFERRED FORMS" to "Detailed description of the drawings". Appropriate correction is required.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, for example, the steps of "comparative assessment", "ordinal pairwise ranking", "generating undominated profile pairs"..etc, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 6, 7, 10, 11, 14, 27 are objected to because of the following informalities:

1. Claim 1 recites "A decision support method comprising: for two or more pre-defined criteria, each criterion associated with one or more pre-defined and ordinally ranked categories, performing a comparative assessment...". The phrase "for two or more...ordinally ranked categories" should be in the preamble section of the claim, not the claim body. The claim body should recite the steps performed by the method, not the setup.

2. Claim 1: change "performing a comparative assessment of profiles each profile comprising a set of two or more of the criteria" to "performing a comparative assessment of profiles, each profile comprising a set of two or more of the criteria"
3. Claim 1: The phrase "each profile comprising a set of two or more of the criteria, each criterion in the set instantiated with one of the categories for that criterion" should also be in the preamble.
4. Claim 1: change "wherein the comparative assessment comprises the ordinal pairwise ranking of profile pairs" to "wherein the comparative assessment comprises ordinal pairwise ranking of profile pairs".
5. Claims 1, 6: change "generating undominated profile pairs" to "generating an undominated profile pairs" unless otherwise explained.
6. Claim 1: change "presenting undominated profile pairs to a decision maker for ordinal pairwise ranking" to "presenting the undominated profile pairs to a decision maker for ordinal pairwise ranking".
7. Claim 1: change "receiving from the decision maker an ordinal ranking of the profiles in each profile pair presented" to "receiving from the decision maker an ordinal ranking of the profiles" or "receiving from the decision maker an ordinal ranking of the profiles presented".
8. Claim 1: change "identifying profile pairs that are implicitly ordinally pairwise ranked as corollaries of ordinal pairwise rankings performed and excluding them from subsequent presentation to the decision maker" to "identifying profile pairs

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that are implicitly ordinally pairwise ranked as corollaries of the ordinal pairwise rankings performed and excluding the profile pairs from subsequent presentation to the decision maker”.

9. Claim 7: change “wherein for any further value of z the step of “ to “wherein for any further value of z, the step of “.

10. Claims 10 and 11: change “comprising the further step” to “further comprising the step of”

11. Claim 13: change “point values wherein” to “point values, wherein”.

Appropriate correction is required.

Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 5 is drawn to identifying all possible profile pairs while claim 1 only recites identifying profile pairs. Hence, the scope of claim 5 is boarder than claim 1. Also, those profile pairs identified in claim 1 already anticipates the “all possible” profile pairs because of the set of “all possible profile pairs that are implicitly ranked” and the set of “profile pairs that are implicitly ranked” are the same.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "each criterion in the set instantiated with one of the categories for that criteria". It is not clear what "instantiated" means. The term "instantiate" can mean to create an object of a specific class, or to represent (an abstract concept) by a concrete or tangible example. It is presumed that applicant is intended to mean creating an object of a specific class. However, the claim does not recite that criteria is an object. Hence the phrase "each criterion in the set instantiated with one of the categories for that criteria" is either rejected as indefinite or lack of antecedent basis.

Claim 6 recites "generating a set of undominated profile pairs with z criteria each". It is not clear what applicant is intended to claim. Claim 1 is presumed to be directed to a "generating an undominated profile pairs". It is not clear whether applicant is intended to claim "generating an undominated profile pairs" or really intended to claim "a set of undominated profile pairs" because claim 1 does not suggest "a set".

Claims 6 and 8, it is not clear what "each" is referring to: the set or the profile?

Claim 7 recites "further value of z". It is not clear what the "further value of z" means. I.e. what is the "further value" of z?

Claims 8, 9, it is not clear what "uninstantiated" and "instantiated" means for the same reason as claim 1 above.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title,

Claims 1-14, 27 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

Claim 27 constitute software modules devoid of any apparent hardware, and therefore are computer programs e.g., functional descriptive material. Since the computer programs are not embodied on an appropriate computer-readable storage "medium, they cannot be afforded patent eligibility. The intrinsic evidence of software per se can be found at applicant's disclosure pg. 8 Line 5.

Claims 1-14 and 27 are rejected under 35 U.S.C 101 because the claims fail to provide a tangible result, and there must be a practical application, by either

- 1) transforming (physical thing) or
- 2) by having the FINAL RESULT (not the steps) achieve or produce
a useful (specific, substantial, AND credible),
concrete (substantially repeatable/non-unpredictable), AND
tangible (real world/non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter must be amended. If the specification discloses a practical application but the

claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

In the present case, **claims 1-14 and 27** are drawn to a system and method for decision support. Such method merely manipulates data by performing a comparative assessment and solving a system of equalities/inequalities to obtain at least one output. Such, in and of itself, is not believed to be directed to a practical application which produces a useful, concrete and tangible result. I.e. the "output" obtained can be anything. Hence, there may or may not be a concrete, useful and tangible result produced. Besides, merely generating an "output" is considered as preemption because the output is not being used in a practical application. While the practical application does not necessarily need to be recited in the claims, the claims in this instance appear to be directed to a process too preliminary to convey any practical application to one of ordinary skill in the pertinent art.

The courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See Le Roy v. Tatham, 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948).

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect

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would be a patent on the [idea, law of nature or natural phenomena] itself." "Here the "process" claim is so abstract and sweeping as to cover both known and unknown uses of the BCD to pure-binary conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (refer herein as APA).

Claims 1-6, 14, 27 are drawn to a decision support method that performing a ordinal pairwise ranking of profile pairs by a decision maker and solving a system of qualities/inequalities that represents the ordinal pairwise rankings to obtain a point value or rankings.

APA teaches pairwise ranking in interval scale or ratio scale (See background of the invention, especially pg. 3 L16-30). It would have been obvious to a person with ordinary skill in the art at the time the invention was made that ratio scale or interval

scale can easily be convert to ordinal scale. One would have been motivated to do so because ordinal scale can easily be ranked.

Claims 7-13 are preclude from examination because the indefiniteness and unclearness as mentioned in 112 2nd rejections above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lut Wong whose telephone number is (571) 270-1123. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent David can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Lut Wong
Patent Examiner 2129



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